ABSTRACT

RESEARCH PAPER: Development of an Immunocytochemistry Protocol for the Study of TAL1 Mediated Apoptotic Resistance in Jurkat Cells

STUDENT: Ryan Gibson

DEGREE: Master of Arts

COLLEGE: Sciences and Humanities

DATE: May 2015

PAGES: 28

The present study sought to develop an immunocytochemistry protocol in order to explore the influence of the transcription factor, TAL1, in inhibiting apoptosis in Jurkat cells during treatment with the chemotherapeutic agent, etoposide. TAL1 is ectopically expressed in 60% of T-cell acute lymphoblastic leukemia cases, of which primary resistant and relapsed variants maintain a poor patient prognosis due to ineffective chemotherapeutic treatments. This study has resulted in the successful development of an immunocytochemistry protocol with the potential to help further oncological research. This protocol will be used to help reveal the role of TAL1 in modulating the expression and function of death-associated proteins, such as Bcl-X_L, $NF_K\beta$/p65, and PARP in future studies. Elucidating the role of TAL1 in facilitating apoptotic resistance may help to identify potential novel targets for more affective chemotherapy treatments.